REQUEST FOR RECONSIDERATION

Reconsideration of the present application is respectfully requested.

Claims 1, 21, 31-47 and 54-70 are pending in the application. Claims 1, 21, 31-47 and 54-70 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-32 of copending application 11/003,558 (a continuation CON application claiming the benefit of the present application). Claims 1, 21, 31-47 and 54-70 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Dahlman et al. (U.S. 6,339,646) in view of Dahlman (WO 99/12284) and Burns (U.S. 6,141,374).

Regarding the provisional rejection of Claims 1, 21, 31-47 and 54-70 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-32 of copending U.S. Application Serial No. 11/003,558 (a continuation CON application claiming the benefit of the present application), since there remain outstanding art rejections under §103, Applicants respectfully reserve the right to address this issue if and when all of the remaining art rejections are overcome.

Regarding the rejection of independent Claims 1, 21, 54, 59 and 65 under §103(a), the Examiner states that Dahlman et al. in view of Dahlman and Burns renders the claims unpatentable. Dahlman et al. discloses slotted code usage in a cellular communications system; Dahlman discloses a method for assigning spreading codes; and, Burns discloses a method and apparatus for generating multiple matched-filter PN vectors in a CDMA demodulator.

It is initially noted that there still remains a misunderstanding of the statement that the Lth secondary scrambling code associated with the primary scrambling code is a result of adding the second m-sequence and L-times shifted first m-sequence.

The Examiner states that the Lth secondary scrambling code associated with the primary scrambling code being a result of adding the second m-sequence and L-times shifted first m-

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sequence is not recited in the claims. Although not recited verbatim, this statement flows directly from a clear understanding of the claim recitations.

1) It is clear from Claim 1 that a secondary scrambling code is the result of adding the second m-sequence and the third m-sequence (see second adding step).

2) It is also clear from Claim 1 that the third m-sequence is the result of masking the first shift register (see masking step), the shift register used to generate that first m-sequence. The masking step produces the third m-sequence.

3) The wherein clause of Claim 1 makes it clear the Lth secondary scrambling code is generated when the masking step cyclically shifts the first m-sequence by, L chips. Since the masking step produces the third m-sequence, this shifting process produces the Lth third m-sequence.

4) Therefore, an Lth secondary scrambling code is generated by adding the second m-sequence to the Lth third m-sequence, the Lth third m-sequence being generated by cyclically shifting the first m-sequence by L chips during the masking step.

Regarding the rejections of Claims 1 and 21, these claims recite three distinct m-sequences being generated. These claims also recite generating a primary scrambling code and a secondary scrambling code using the three m-sequences. These claims also recite that a first shift register is used to generate the first and third m-sequences, and that a second shift register is used to generate the second m-sequence. These claims also recite that masking the first m-sequence produces the third m-sequence. The masking step is further defined in the wherein clause which further defines the operation of the first shift register in the production of an Lth secondary scrambling code.

Dahlman et al. teaches in FIG. 4 that one or more shift registers can be used to generate scrambling codes. Primary and secondary scrambling codes are well defined in the art. In a

UMTS mobile communication system each base station has a unique scrambling code referred to as a primary scrambling code that is used to allow terminals to differentiate each base station from other base stations in the system. Also each unique scrambling code used for spreading (scrambling) downlink channel signals of each base stations is also referred to as the primary scrambling code. When there exists no more orthogonal codes with a primary scrambling code to be allocated for channel separation, the individual base station uses a secondary scrambling code selected from its multiple secondary scrambling code groups corresponding to the primary scrambling codes used. Claims 1 and 21 recite the generation of primary and secondary scrambling codes. Dahlman et al. does not teach or disclose the use or generation of primary and secondary scrambling codes. Neither Burns nor Dahlman cures this deficiency.

Burns teaches masking an output of a PN generator. In Burns it is the PN code of the PN generator that is masked as shown in FIG. 3. Claims 1 and 21 recite that the first m-sequence is masked to produce a third m-sequence. Neither Burns nor Dahlman et al. teach or disclose masking a first m-sequence to generate a third m-sequence.

Claims 1 and 21 recite three distinct m-sequences, the first and second of which are added to generate a primary scrambling code, and the second and third of which are added to generate a secondary scrambling code. This generation and use of first, second and third m-sequences to generate primary and secondary scrambling codes are not taught or disclosed by any combination of Dahlman et al., Dahlman, and Burns.

Further, Claims 1 and 21 specifically recite how a specific secondary scrambling code, the Lth secondary scrambling code, is produced. It is clear from these claims that the Lth secondary scrambling code is generated by adding the second m-sequence to an Lth third m-sequence, the Lth third m-sequence being generated by cyclically shifting the first m-sequence by L chips during the masking step. A masking step that cyclically shifts a first m-sequence by L chips to generate an Lth secondary scrambling code associated with a primary scrambling code is not taught or disclosed by any combination of Dahlman et al., Dahlman, and Burns.

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Regarding Claim 54, this claim recites, "wherein an Lth Gold code is generated by adding an (L-1)-times shifted first m-sequence and a second m-sequence." It is clear from the claim that the Lth Gold code is generated by adding the (L-1)-times shifted first m-sequence and the second m-sequence. The generation of the Lth Gold code by adding an (L-1)-times shifted first m-sequence and a second m-sequence is not taught or disclosed by any combination of Dahlman et al., Dahlman, and Burns.
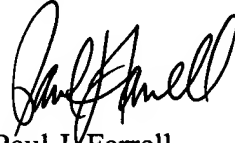
Claim 59 recites, "at least one adder for generating a ((K-1)*M+K)-th Gold code as a K-th primary scrambling code by adding a ((K-1)*M+K-1)-times shifted first m-sequence and the second m-sequence". It is clear from the claim that the ((K-1)*M+K)-th Gold code is generated by adding the ((K-1)*M+K-1)-times shifted first m-sequence and the second m-sequence. The generation of the ((K-1)*M+K)-th Gold code by adding an ((K-1)*M+K-1)-times shifted first m-sequence and a second m-sequence is not taught or disclosed by any combination of Dahlman et al., Dahlman, and Burns.

Claim 65 recites, "generating a ((K-1)*M+K)-th Gold code as a K-th primary scrambling code by adding the ((K-1)*M+K-1)-times shifted first m-sequence and the second m-sequence". It is clear from the claim that the ((K-1)*M+K)-th Gold code is generated by adding the ((K-1)*M+K-1)-times shifted first m-sequence and the second m-sequence. The generation of the ((K-1)*M+K)-th Gold code by adding an ((K-1)*M+K-1)-times shifted first m-sequence and a second m-sequence is not taught or disclosed by any combination of Dahlman et al., Dahlman, and Burns.

Independent Claims 1, 21, 54, 59 and 65 are believed to be in condition for allowance. Without conceding the patentability per se of dependent Claims 55-58, 60-64 and 66-70, these are likewise believed to be allowable by virtue of their dependence on their respective amended independent claims. Accordingly, reconsideration and withdrawal of the rejections of dependent Claims 55-58, 60-64 and 66-70 is respectfully requested.

Accordingly, all of the claims pending in the Application, namely, Claims 1, 21, 31-47 and 54-70, are believed to be in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,

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